RAW SEQUENCE LISTING

The Biotechnology Systems Branch of the Scientific and Technical Information Center (STIC) no errors detected.

10/558.276
Parlo
12/5/05

ENTERED



CT

RAW SEQUENCE LISTING DATE: 12/05/2005
PATENT APPLICATION: US/10/558,276 TIME: 10:54:33

Input Set : A:\Sequence Listing 05986-100M536-US1.txt

Output Set: N:\CRF4\12052005\J558276.raw

```
3 <110> APPLICANT: Wisniewski, Thomas
      4
             Sigurdsson, Einar
             Goni, Fernando
      7 <120> TITLE OF INVENTION: MUCOSAL IMMUNIZATION TO PREVENT PRION INFECTION
      9 <130> FILE REFERENCE: 05986/100M536-US1
C--> 11 <140> CURRENT APPLICATION NUMBER: US/10/558,276
C--> 11 <141> CURRENT FILING DATE: 2005-11-18
     11 <150> PRIOR APPLICATION NUMBER: PCT/US04/16242
     12 <151> PRIOR FILING DATE: 2004-05-20
     14 <150> PRIOR APPLICATION NUMBER: 60/472,262
     15 <151> PRIOR FILING DATE: 2003-05-20
     17 <160> NUMBER OF SEQ ID NOS: 32
     19 <170> SOFTWARE: PatentIn version 3.3
     21 <210> SEQ ID NO: 1
     22 <211> LENGTH: 253
     23 <212> TYPE: PRT
     24 <213> ORGANISM: Homo sapiens
     26 <400> SEQUENCE: 1
     28 Met Ala Asn Leu Gly Cys Trp Met Leu Val Leu Phe Val Ala Thr Trp
     32 Ser Asp Leu Gly Leu Cys Lys Lys Arg Pro Lys Pro Gly Gly Trp Asn
     36 Thr Gly Gly Ser Arg Tyr Pro Gly Gln Gly Ser Pro Gly Gly Asn Arg
     40 Tyr Pro Pro Gln Gly Gly Gly Trp Gly Gln Pro His Gly Gly Gly
     44 Trp Gly Gln Pro His Gly Gly Gly Trp Gly Gln Pro His Gly Gly Gly
     48 Trp Gly Gln Pro His Gly Gly Gly Trp Gly Gln Gly Gly Gly Thr His
    52 Ser Gln Trp Asn Lys Pro Ser Lys Pro Lys Thr Asn Met Lys His Met
                   100
                                       105
    56 Ala Gly Ala Ala Ala Gly Ala Val Gly Gly Leu Gly Gly Tyr
     60 Met Leu Gly Ser Ala Met Ser Arg Pro Ile Ile His Phe Gly Ser Asp
           130
     64 Tyr Glu Asp Arg Tyr Tyr Arg Glu Asn Met His Arg Tyr Pro Asn Gln
                           150
                                                155
    68 Val Tyr Tyr Arg Pro Met Asp Glu Tyr Ser Asn Gln Asn Asn Phe Val
                                           170
    72 His Asp Cys Val Asn Ile Thr Ile Lys Gln His Thr Val Thr Thr
                                       185
```

76 Thr Lys Gly Glu Asn Phe Thr Glu Thr Asp Val Lys Met Met Glu Arg

RAW SEQUENCE LISTING DATE: 12/05/2005
PATENT APPLICATION: US/10/558,276 TIME: 10:54:33

Input Set : A:\Sequence Listing 05986-100M536-US1.txt

Output Set: N:\CRF4\12052005\J558276.raw

```
195
                               200
80 Val Val Glu Gln Met Cys Ile Thr Gln Tyr Glu Arg Glu Ser Gln Ala
84 Tyr Tyr Gln Arg Gly Ser Ser Met Val Leu Phe Ser Ser Pro Pro Val
85 225
                       230
                                           235
88 Ile Leu Leu Ile Ser Phe Leu Ile Phe Leu Ile Val Gly
92 <210> SEQ ID NO: 2
93 <211> LENGTH: 264
94 <212> TYPE: PRT
95 <213> ORGANISM: Bovine
97 <400> SEQUENCE: 2
99 Met Val Lys Ser His Ile Gly Ser Trp Ile Leu Val Leu Phe Val Ala
103 Met Trp Ser Asp Val Gly Leu Cys Lys Lys Arg Pro Lys Pro Gly Gly
107 Gly Trp Asn Thr Gly Gly Ser Arg Tyr Pro Gly Gln Gly Ser Pro Gly
111 Gly Asn Arg Tyr Pro Pro Gln Gly Gly Gly Trp Gly Gln Pro His
                            55
115 Gly Gly Gly Trp Gly Gln Pro His Gly Gly Gly Trp Gly Gln Pro His
119 Gly Gly Gly Trp Gly Gln Pro His Gly Gly Gly Trp Gly Gln Pro His
123 Gly Gly Gly Trp Gly Gln Gly Gly Thr His Gly Gln Trp Asn Lys
                                    105
127 Pro Ser Lys Pro Lys Thr Asn Met Lys His Val Ala Gly Ala Ala Ala
           115
                                120
                                                    125
131 Ala Gly Ala Val Val Gly Gly Leu Gly Gly Tyr Met Leu Gly Ser Ala
                            135
135 Met Ser Arg Pro Leu Ile His Phe Gly Ser Asp Tyr Glu Asp Arg Tyr
136 145
                        150
                                            155
139 Tyr Arg Glu Asn Met His Arg Tyr Pro Asn Gln Val Tyr Tyr Arg Pro
                    165
                                        170
143 Val Asp Gln Tyr Ser Asn Gln Asn Asn Phe Val His Asp Cys Val Asn
                180
                                    185
147 Ile Thr Val Lys Glu His Thr Val Thr Thr Thr Lys Gly Glu Asn
           195
                                200
151 Phe Thr Glu Thr Asp Ile Lys Met Met Glu Arg Val Val Glu Gln Met
       210
                            215
155 Cys Ile Thr Gln Tyr Gln Arg Glu Ser Gln Ala Tyr Tyr Gln Arg Gly
                        230
                                            235
159 Ala Ser Val Ile Leu Phe Ser Ser Pro Pro Val Ile Leu Leu Ile Ser
                    245
                                        250
163 Phe Leu Ile Phe Leu Ile Val Gly
                260
167 <210> SEQ ID NO: 3
168 <211> LENGTH: 256
169 <212> TYPE: PRT
```

RAW SEQUENCE LISTINGPATENT APPLICATION: **US/10/558,276**DATE: 12/05/2005

TIME: 10:54:33

Input Set : A:\Sequence Listing 05986-100M536-US1.txt

Output Set: N:\CRF4\12052005\J558276.raw

170 <213> ORGANISM: Deer 172 <400> SEQUENCE: 3 174 Met Val Lys Ser His Ile Gly Ser Trp Ile Leu Val Leu Phe Val Ala 178 Met Trp Ser Asp Val Gly Leu Cys Lys Lys Arg Pro Lys Pro Gly Gly 182 Gly Trp Asn Thr Gly Gly Ser Arg Tyr Pro Gly Gln Gly Ser Pro Gly 186 Gly Asn Arg Tyr Pro Pro Gln Gly Gly Gly Gly Trp Gly Gln Pro His 190 Gly Gly Gly Trp Gly Gln Pro His Gly Gly Gly Trp Gly Gln Pro His 70 194 Gly Gly Gly Trp Gly Gln Pro His Gly Gly Gly Gly Trp Gly Gln Gly 85 90 198 Gly Thr His Ser Gln Trp Asn Lys Pro Ser Lys Pro Lys Thr Asn Met 105 202 Lys His Val Ala Gly Ala Ala Ala Gly Ala Val Gly Gly Leu 115 120 206 Gly Gly Tyr Met Leu Gly Ser Ala Met Ser Arg Pro Leu Ile His Phe 135 140 210 Gly Asn Asp Tyr Glu Asp Arg Tyr Tyr Arg Glu Asn Met Tyr Arg Tyr 150 155 214 Pro Asn Gln Val Tyr Tyr Arg Pro Val Asp Gln Tyr Asn Asn Gln Asn 165 170 218 Thr Phe Val His Asp Cys Val Asn Ile Thr Val Lys Gln His Thr Val 219 180 185 222 Thr Thr Thr Thr Lys Gly Glu Asn Phe Thr Glu Thr Asp Ile Lys Met 195 200 226 Met Glu Arg Val Val Glu Gln Met Cys Ile Thr Gln Tyr Gln Arg Glu 215 230 Ser Glu Ala Tyr Tyr Gln Arg Gly Ala Ser Val Ile Leu Phe Ser Ser 230 235 234 Pro Pro Val Ile Leu Leu Ile Ser Phe Leu Ile Phe Leu Ile Val Gly 235 245 250 238 <210> SEQ ID NO: 4 239 <211> LENGTH: 256 240 <212> TYPE: PRT 241 <213> ORGANISM: Elk 243 <400> SEQUENCE: 4 245 Met Val Lys Ser His Ile Gly Ser Trp Ile Leu Val Leu Phe Val Ala 10 249 Met Trp Ser Asp Val Gly Leu Cys Lys Lys Arg Pro Lys Pro Gly Gly 20 25 253 Gly Trp Asn Thr Gly Gly Ser Arg Tyr Pro Gly Gln Gly Ser Pro Gly 257 Gly Asn Arg Tyr Pro Pro Gln Gly Gly Gly Trp Gly Gln Pro His 261 Gly Gly Gly Trp Gly Gln Pro His Gly Gly Gly Trp Gly Gln Pro His

RAW SEQUENCE LISTING DATE: 12/05/2005
PATENT APPLICATION: US/10/558,276 TIME: 10:54:33

Input Set : A:\Sequence Listing 05986-100M536-US1.txt
Output Set: N:\CRF4\12052005\J558276.raw

265 Gly Gly Gly Trp Gly Gln Pro His Gly Gly Gly Trp Gly Gln Gly 269 Gly Thr His Ser Gln Trp Asn Lys Pro Ser Lys Pro Lys Thr Asn Met 270 105 273 Lys His Val Ala Gly Ala Ala Ala Gly Ala Val Val Gly Gly Leu 115 120 277 Gly Gly Tyr Met Leu Gly Ser Ala Met Ser Arg Pro Leu Ile His Phe 135 281 Gly Asn Asp Tyr Glu Asp Arg Tyr Tyr Arg Glu Asn Met Tyr Arg Tyr 282 145 150 155 285 Pro Asn Gln Val Tyr Tyr Arg Pro Val Asp Gln Tyr Asn Asn Gln Asn 165 170 289 Thr Phe Val His Asp Cys Val Asn Ile Thr Val Lys Gln His Thr Val 180 185 293 Thr Thr Thr Lys Gly Glu Asn Phe Thr Glu Thr Asp Ile Lys Met 200 297 Met Glu Arg Val Val Glu Gln Met Cys Ile Thr Gln Tyr Gln Arg Glu 215 220 301 Ser Glu Ala Tyr Tyr Gln Arg Gly Ala Ser Val Ile Leu Phe Ser Ser 302 225 230 235 305 Pro Pro Val Ile Leu Leu Ile Ser Phe Leu Ile Phe Leu Ile Val Gly 306 245 250 309 <210> SEQ ID NO: 5 310 <211> LENGTH: 256 311 <212> TYPE: PRT 312 <213> ORGANISM: Odocoileus hemionus 314 <400> SEQUENCE: 5 316 Met Val Lys Ser His Ile Gly Ser Trp Ile Leu Val Leu Phe Val Ala 317 1 10 320 Met Trp Ser Asp Val Gly Leu Cys Lys Lys Arg Pro Lys Pro Gly Gly 324 Gly Trp Asn Thr Gly Gly Ser Arg Tyr Pro Gly Gln Gly Ser Pro Gly 328 Gly Asn Arg Tyr Pro Pro Gln Gly Gly Gly Gly Trp Gly Gln Pro His 332 Gly Gly Gly Trp Gly Gln Pro His Gly Gly Gly Trp Gly Gln Pro His 70 336 Gly Gly Gly Trp Gly Gln Pro His Gly Gly Gly Gly Trp Gly Gln Gly 85 340 Gly Thr His Ser Gln Trp Asn Lys Pro Ser Lys Pro Lys Thr Asn Met 100 105 344 Lys His Val Ala Gly Ala Ala Ala Gly Ala Val Val Gly Gly Leu 115 120 125 348 Gly Gly Tyr Met Leu Gly Ser Ala Met Asn Arg Pro Leu Ile His Phe 349 135 352 Gly Asn Asp Tyr Glu Asp Arg Tyr Tyr Arg Glu Asn Met Tyr Arg Tyr 150 155 356 Pro Asn Gln Val Tyr Tyr Arg Pro Val Asp Gln Tyr Asn Asn Gln Asn 165 170

RAW SEQUENCE LISTING DATE: 12/05/2005
PATENT APPLICATION: US/10/558,276 TIME: 10:54:33

Input Set : A:\Sequence Listing 05986-100M536-US1.txt
Output Set: N:\CRF4\12052005\J558276.raw

360 Thr Phe Val His Asp Cys Val Asn Ile Thr Val Lys Gln His Thr Val 185 364 Thr Thr Thr Lys Gly Glu Asn Phe Thr Glu Thr Asp Ile Lys Met 368 Met Glu Arg Val Val Glu Gln Met Cys Ile Thr Gln Tyr Gln Arg Glu 215 372 Ser Gln Ala Tyr Tyr Gln Arg Gly Ala Ser Val Ile Leu Phe Ser Ser 235 376 Pro Pro Val Ile Leu Leu Ile Ser Phe Leu Ile Phe Leu Ile Val Gly 245 250 380 <210> SEQ ID NO: 6 381 <211> LENGTH: 254 382 <212> TYPE: PRT 383 <213> ORGANISM: Mus musculus 385 <400> SEQUENCE: 6 387 Met Ala Asn Leu Gly Tyr Trp Leu Leu Ala Leu Phe Val Thr Met Trp 391 Thr Asp Val Gly Leu Cys Lys Lys Arg Pro Lys Pro Gly Gly Trp Asn 395 Thr Gly Gly Ser Arg Tyr Pro Gly Gln Gly Ser Pro Gly Gly Asn Arg 399 Tyr Pro Pro Gln Gly Gly Thr Trp Gly Gln Pro His Gly Gly Gly Trp 403 Gly Gln Pro His Gly Gly Ser Trp Gly Gln Pro Pro Gly Gly Ser Trp 407 Gly Gln Pro His Gly Gly Gly Trp Gly Gln Gly Gly Gly Thr His Asn 90 411 Gln Trp Asn Lys Pro Ser Lys Pro Lys Thr Asn Leu Lys His Val Ala 100 105 415 Gly Ala Ala Ala Gly Ala Val Gly Gly Leu Gly Gly Tyr Met 120 419 Leu Gly Ser Ala Met Ser Arg Pro Met Ile His Phe Gly Asn Asp Trp 135 423 Glu Asp Arg Tyr Tyr Arg Glu Asn Met Tyr Arg Tyr Pro Asn Gln Val 150 155 427 Tyr Tyr Arg Pro Val Asp Gln Tyr Ser Asn Gln Asn Asn Phe Val His 165 170 431 Asp Cys Val Asn Ile Thr Ile Lys Gln His Thr Val Thr Thr Thr Thr 180 185 435 Lys Gly Glu Asn Phe Thr Glu Thr Asp Val Lys Met Met Glu Arg Val 195 200 439 Val Glu Gln Met Cys Val Thr Gln Tyr Gln Lys Glu Ser Asp Ala Tyr 215 220 443 Tyr Asp Gly Arg Arg Ser Ser Ser Thr Val Leu Phe Ser Ser Pro Pro 230 235 447 Val Ile Leu Leu Ile Ser Phe Leu Ile Phe Leu Ile Val Gly 245 451 <210> SEQ ID NO: 7 452 <211> LENGTH: 225

RAW SEQUENCE LISTING ERROR SUMMARY DATE: 12/05/2005
PATENT APPLICATION: US/10/558,276 TIME: 10:54:34

Input Set : A:\Sequence Listing 05986-100M536-US1.txt
Output Set: N:\CRF4\12052005\J558276.raw

Please Note:

Use of n and/or Xaa have been detected in the Sequence Listing. Please review the Sequence Listing to ensure that a corresponding explanation is presented in the <220> to <223> fields of each sequence which presents at least one n or Xaa.

```
Seq#:17; Xaa Pos. 121,122,123,129,130
Seq#:18; Xaa Pos. 132,133,139,140,141
Seq#:19; Xaa Pos. 1,2,3,4,5,6,7,8,9,10,42,43,49,50,51
Seq#:20; Xaa Pos. 1,2,3,4,5,6,7,8,9,10,42,43,49,50,51,97,98,104,105,106
Seq#:21; Xaa Pos. 32,33,39,40,41,56,57,58,59,60,61,62,63,64,65
Seq#:22; Xaa Pos. 32,33,39,40,41,87,88,94,95,96,111,112,113,114,115,116,117
Seq#:22; Xaa Pos. 118,119,120
Seq#:23; Xaa Pos. 1,2,3,4,5,6,7,8,9,10,42,43,49,50,51,66,67,68,69,70,71,72
Seq#:23; Xaa Pos. 73,74,75
Seq#:24; Xaa Pos. 1,2,3,4,5,6,7,8,9,10,42,43,49,50,51,97,98,104,105,106,121
Seq#:24; Xaa Pos. 122,123,124,125,126,127,128,129,130
Seq#:25; Xaa Pos. 1,2,3,4,5,6,7,8,9,10,50,51,57,58,59
Seq#:26; Xaa Pos. 1,2,3,4,5,6,7,8,9,10,50,51,57,58,59,113,114,120,121,122
Seg#:27; Xaa Pos. 40,41,47,48,49,64,65,66,67,68,69,70,71,72,73
Seq#:28; Xaa Pos. 40,41,47,48,49,103,104,110,111,112,127,128,129,130,131
Seq#:28; Xaa Pos. 132,133,134,135,136
Seq#:29; Xaa Pos. 1,2,3,4,5,6,7,8,9,10,50,51,57,58,59,74,75,76,77,78,79,80
Seq#:29; Xaa Pos. 81,82,83
Seq#:30; Xaa Pos. 1,2,3,4,5,6,7,8,9,10,127,128,129,130,131,132,133,134,135
Seq#:30; Xaa Pos. 136
Seq#:32; Xaa Pos. 1,2,8,9,10
```

Invalid <213> Response:

Use of "Artificial" only as "<213> Organism" response is incomplete, per 1.823(b) of New Sequence Rules. Valid response is Artificial Sequence.

Seq#:17,18,19,20,21,22,23,24,25,26,27,28,29,30,32

VERIFICATION SUMMARYPATENT APPLICATION: **US/10/558,276**DATE: 12/05/2005 TIME: 10:54:34

Input Set: A:\Sequence Listing 05986-100M536-US1.txt
Output Set: N:\CRF4\12052005\J558276.raw

```
L:11 M:270 C: Current Application Number differs, Replaced Current Application No
L:11 M:271 C: Current Filing Date differs, Replaced Current Filing Date
L:1213 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:17 after pos.:112
L:1217 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:17 after pos.:128
L:1297 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:18 after pos.:128
L:1354 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:19 after pos.:0
L:1362 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:19 after pos.:32
L:1366 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:19 after pos.:48
L:1395 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:20 after pos.:0
L:1403 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:20 after pos.:32
L:1407 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:20 after pos.:48
L:1419 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:20 after pos.:96
L:1452 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:21 after pos.:16
L:1456 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:21 after pos.:32
L:1460 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:21 after pos.:48
L:1464 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:21 after pos.:64
L:1493 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:22 after pos.:16
L:1497 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:22 after pos.:32
L:1509 \ M:341 \ W: \ (46) "n" or "Xaa" used, for SEQ ID#:22 after pos.:80
L:1513 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:22 after pos.:96
L:1517 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:22 after pos.:112
L:1547 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:23 after pos.:0
L:1555 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:23 after pos.:32
L:1559 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:23 after pos.:48
L:1563 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:23 after pos.:64
L:1593 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:24 after pos.:0
L:1601 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:24 after pos.:32
L:1605 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:24 after pos.:48
L:1617 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:24 after pos.:96
L:1621 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:24 after pos.:112
L:1625 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:24 after pos.:128
L:1650 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:25 after pos.:0
L:1662 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:25 after pos.:48
L:1691 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:26 after pos.:0
L:1703 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:26 after pos.:48
L:1719 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:26 after pos.:112
L:1756 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:27 after pos.:32
L:1760 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:27 after pos.:48
L:1764 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:27 after pos.:64
L:1797 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:28 after pos.:32
L:1801 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:28 after pos.:48
L:1813 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:28 after pos.:96
L:1817 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:28 after pos.:112
L:1821 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:28 after pos.:128
L:1851 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:29 after pos.:0
L:1863 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:29 after pos.:48
L:1867 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:29 after pos.:64
L:1871 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:29 after pos.:80
```

VERIFICATION SUMMARY

PATENT APPLICATION: US/10/558,276

DATE: 12/05/2005 TIME: 10:54:34

Input Set : A:\Sequence Listing 05986-100M536-US1.txt

Output Set: N:\CRF4\12052005\J558276.raw

L:1901 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:30 after pos.:0 L:1929 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:30 after pos.:112 L:1933 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:30 after pos.:128 L:2012 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:32 after pos.:0